

What is claimed is:

1. A magnetoresistive effective element comprising a first shielding layer, a second shielding layer, a magnetoresistive effective film, a first gap layer, a pair of magnetic domain controlling layers, a pair of electrode layers and second gap layers,

said first shielding layer and said second shielding layer being disposed by a given distance,

said magnetoresistive effective film being disposed in between said first shielding layer and said second shielding layer,

said first gap film being formed on said magnetoresistive effective film with commensurate to a surface configuration of said magnetoresistive effective film,

said magnetic domain controlling films being disposed at both sides of said magnetoresistive effective film, respectively,

said electrode layers being formed on said magnetic domain controlling layers, respectively,

one of said second gap layers being located between said magnetoresistive effective film; said magnetic domain controlling layers and said first shielding layer, and the other being located between said first gap layer; said electrode layer and said second shielding layer.

2. The magnetoresistive effective element as defined in claim 1, wherein said magnetoresistive effective film is made of a spin valve film.

3. The magnetoresistive effective element as defined in claim 1, wherein said first gap layer is made of metal oxide.

4. The magnetoresistive effective element as defined in claim 1, wherein said first gap layer includes at least one selected from the group consisting of AlO_x, AlN, DLC, CN, SiO₂, TaO_x, FeO_x, NiO_x, CoO_x.

5. The magnetoresistive effective element as defined in claim 1, wherein a total thickness G₁+G_{sv} of said magnetoresistive effective film and said first gap layer is set larger than a total thickness H_d+L_d of said magnetic domain controlling layers and said electrode layers.

6. The magnetoresistive effective element as defined in claim 5, wherein both sides of said second shielding layer are depressed at both sides of said magnetoresistive effective film in a front view, respectively.

7. The magnetoresistive effective element as defined in claim 1, wherein a thickness of the other second gap layer is set to 4nm or over.

8. A magnetoresistive effective element comprising a first shielding layer, a second shielding layer, a magnetoresistive effective film, a first gap layer, a pair of magnetic domain controlling layers, and a pair of electrode layers, said first shielding layer and said second shielding layer being disposed by a given distance,

said magnetoresistive effective film being disposed in between said first shielding layer and said second shielding layer,

said first gap layer being made of electrical conductive material, and formed on said magnetoresistive effective film with commensurate to a surface configuration of said magnetoresistive effective film,

said magnetic domain controlling films being disposed at both sides of said magnetoresistive effective film, respectively,

one of said electrode layers being electrically connected to said magnetoresistive effective film in the far side from said first gap layer, constituting one second gap layer, and the other being electrically connected to said first gap layer, constituting the other second gap layer.

9. The magnetoresistive effective element as defined in claim 8, wherein said magnetoresistive effective film is made of a spin valve film or a ferromagnetic tunnel junction film.

10. The magnetoresistive effective element as defined in claim 8, wherein said first gap layer is made of metal.

11. The magnetoresistive effective element as defined in claim 8, wherein a total thickness of said magnetoresistive effective film and said first gap layer is set larger than a thickness of said magnetic domain controlling layers.

12. The magnetoresistive effective element as defined in claim 11, wherein both sides of said second shielding layer are depressed at both sides of the MR film in a front view, respectively.

13. A magnetoresistive effective element comprising a first shielding layer, a second shielding layer, a magnetoresistive effective film, a first gap layer, a pair of magnetic domain controlling layers, and a bottom electrode layer,

said first shielding layer and said second shielding layer being disposed by

a given distance,

said magnetoresistive effective film being disposed in between said first shielding layer and said second shielding layer,

said first gap layer being made of electrical conductive material, and formed on said magnetoresistive effective film with commensurate to a surface configuration of said magnetoresistive effective film,

said magnetic domain controlling films being disposed at both sides of said magnetoresistive effective film, respectively,

said bottom electrode layer being electrically connected to said magnetoresistive effective film in the far side from said first gap layer, constituting one second gap layer,

said second shielding layer functioning as a top electrode layer electrically connected to said first gap layer, constituting the other second gap layer.

14. The magnetoresistive effective element as defined in claim 13, wherein said magnetoresistive effective film is made of a spin valve film or a ferromagnetic tunnel junction film.

15. The magnetoresistive effective element as defined in claim 13, wherein said first gap layer is made of metal.

16. The magnetoresistive effective element as defined in claim 13, wherein a total thickness of said magnetoresistive effective film and said first gap layer is set larger than a thickness of said magnetic domain controlling layers.

17. The magnetoresistive effective element as defined in claim 16, wherein both sides of said second shielding layer are depressed at both sides of the MR film in a front view, respectively.

18. A thin film magnetic head comprising a magnetoresistive effective element as defined in claim 1 and a slider to support said magnetoresistive effective element.

19. A thin film magnetic head comprising a magnetoresistive effective element as defined in claim 8 and a slider to support said magnetoresistive effective element.

20. A thin film magnetic head comprising a magnetoresistive effective element as defined in claim 13 and a slider to support said magnetoresistive effective element.

21. A magnetic head device comprising a thin film magnetic head as defined in claim 18 and a head supporting device to support said thin film magnetic head.

22. A magnetic head device comprising a thin film magnetic head as defined in claim 19 and a head supporting device to support said thin film magnetic head.

23. A magnetic head device comprising a thin film magnetic head as defined in claim 20 and a head supporting device to support said thin film magnetic head.

24. A magnetic recording/reproducing device comprising a magnetic head device as defined in claim 21 and a magnetic disk to be magnetically recorded and reproduced with cooperated with said magnetic head device.

25. A magnetic recording/reproducing device comprising a magnetic head device as defined in claim 22 and a magnetic disk to be magnetically recorded and reproduced with cooperated with said magnetic head device.

26. A magnetic recording/reproducing device comprising a magnetic head device as defined in claim 23 and a magnetic disk to be magnetically recorded and reproduced with cooperated with said magnetic head device.